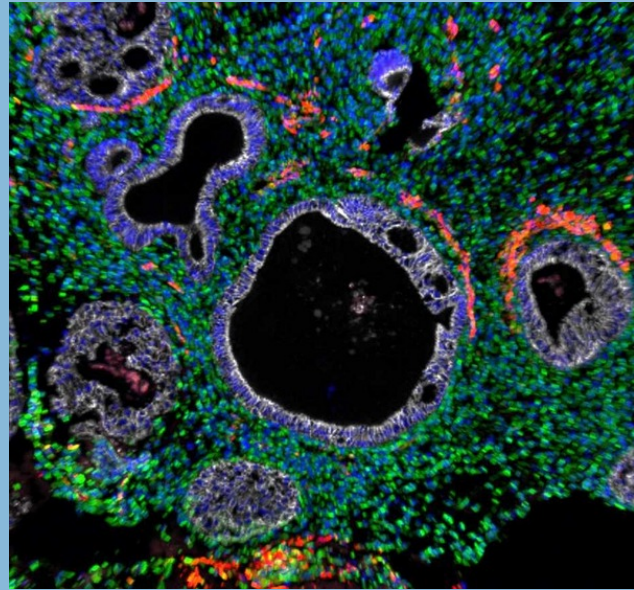




On the Inside

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Human iPSC-derived intestinal organoid image from the Munera laboratory. From "Retinoic acid promotes the *in vitro* growth and patterning and improves the cellular composition of human pluripotent stem-cell-derived intestinal organoids." Qu N. et al., *Intl J. Molec Sci* (in press). E-cadherin: white; vimentin: green; SMA: red.

A Note from the Directors



Don C. Rockey
DDRCC Director

Dear All: as we pass the mid-point of Summer and the second quarter of Year 3, we are always delighted to see the ongoing progress of our supported members. This month, we especially note the expansion of our ranks by new full member and affiliated faculty with interests in GI and related metabolic disease. Please take a moment to read about Drs.



Stephen Duncan
CDLD Director

Guglietta, Hathaway-Schrader, and Cornier below. The funding successes of our members is also fantastic to see and are noted in our News and Notes section, along with the renown that our center members are gaining both on campus and in the research world.

As part of our continued efforts to grow and foster GI & liver research and researchers at MUSC, we would also draw attention to the Request for Applications below for the next cycle of COBRE in Digestive and Liver Disease Junior Investigators. As most of you know, the CDLD JI program provides three years of direct support and supported core usage to eligible young investigators. Please take a moment to consider this opportunity, both for yourselves, and for junior investigators that you know that might have interest.

As part of our related "quality improvement" processes, **please be sure to respond thoughtfully to the annual core usage and evaluation surveys that Kyu will send in August.** Continued success in "growing" our cores and fostering their use is key to our fostering a vibrant and collaborative digestive disease community here at MUSC.

Our **7 am Clinical / Translational** and **11 am Basic Science** virtual enrichment series are currently on hiatus for the summer, and will kick off on **September 21**. As always, we are interested in your suggestions for future seminars, so please let us know if you'd like to hear from a particular guest speaker during the 2022-23 Seminar Series re-commencing in September. ([email Antonis](#) or [Don](#)).

Best wishes,

Don and Steve

Welcome New Members!

A primary role of the MUSC Digestive Disease Research Core Center is to provide support for GI & liver disease researchers across the campus, and to foster communication and collaboration between our 41 full members, who represent a dozen basic science and clinical divisions at MUSC. As part of these functions, we are glad to provide the updates below on our steadily growing full member ranks, and on the associated GI and metabolic disease clinical, translational and basic research community.

New Full Member Faculty



Silvia Guglietta, PhD

Regenerative Medicine & Cell Biology

Following her instructorship in the Microbiology & Immunology Dept. at MUSC, former CDLD pilot awardee Dr. Guglietta was recently appointed Assistant Professor in the Regenerative Medicine & Cell Biology. Dr. Guglietta received her PhD in Immunology at the University of Rome

"Sapienza," and pursued post-doctoral training at the European Institute of Oncology in Milan. Her laboratory focuses on the interplay of intestinal immune responses and the microbiome in the development of inflammatory bowel disease and GI cancer. Welcome, Dr. Guglietta!



Jessica Hathaway-Schrader, MS, PhD

Pathology & Laboratory Medicine

Following completion of her postdoctoral fellowship in the Novince Lab in the Dept. of Oral Health Sciences, Dr. Hathaway-Schrader was appointed at the Ralph H. Johnson VA Medical Center and as Assistant Professor in the Dept of Pathology at MUSC. Dr. Hathaway-Schrader received her

PhD in Microbiology and Immunology from MUSC, studying novel immunomodulatory mechanisms in metastatic melanoma. Following postdoctoral work focused on the impacts of commensal microbiota in osteoimmunology and bone remodeling, Dr. Hathaway-Schrader intends to sharpen the focus of her laboratory's research onto the role of complement signaling in mediating the effects of gut microbiota on skeletal maturation across the lifespan. Welcome, Dr. Hathaway-Schrader!

Update: Division of Endocrinology (Medicine)



Marc Cornier, MD

Marc-Andre Cornier, MD

Dr. [Marc-Andre Cornier](#) arrived in the Fall of 2021 to take on the role of James A. Keating Endowed Chair in Diabetes, and **Director of the Endocrine Division in the Department of Medicine** at MUSC.

Dr. Cornier received his medical degree from the Medical College of Georgia, and pursued residency training in Internal Medicine at Georgetown University Medical Center.

Following his fellowship training in Endocrinology at the University of Colorado Health Science Center in Denver, CO, Dr. Cornier stayed on as faculty, and served as Associate Division Head for Endocrinology.

Dr. Cornier also served as the leader of the Clinical Intervention and Translational Core (CIT) within the NIDDK-funded Colorado Nutrition Obesity Research Center (NORC) (P30 DK048520). Dr. Cornier is an active clinical and translational investigator with a primary research interest in understanding the complex regulation of food intake and body weight and in studying optimal interventions for weight management and metabolic health. He has also been involved in clinical trials for investigational treatments for lipid disorders and obesity.

At MUSC he continues to focus on cardiometabolic diseases such as diabetes, lipid disorders and obesity where he is also the medical director of the Diabetes Medical Service and Chair of the Hospital Diabetes Task Force. Welcome, Dr. Cornier!

Notes from the DDRCC

COBRE in Digestive and Liver Disease Request for Junior Investigator Award Applications:

Key Dates

Letter of Intent Due: August 29, 2022

Invitation to Submit Full Application: September 2, 2022

Full Application Due: October 14, 2022

Earliest Award Start Date: February 1, 2023

OVERVIEW

The MUSC Center of Biomedical Research Excellence (COBRE) in Digestive and Liver Disease (CDLD) is requesting applications for a Junior Investigator Award. **The award provides approximately \$150,000 in annual direct costs for up to three years, access to biostatisticians, and free use of the CDLD Core Resources.** In addition, CDLD Junior Investigators are provided mentoring and career development support to ensure a smooth transition to independence and to secure R01 funding. Project leaders must annually contribute a minimum of 6 calendar months to the CDLD project.

The overarching objective of the CDLD is to enhance the research capacity and competitiveness of CDLD members and Junior Investigators by expanding available infrastructure, access to quality training, and opportunities to collaborate, thereby enabling outstanding basic research in digestive and liver disease. It is also expected that the CDLD will facilitate collaboration and integration of our Junior Investigators with other members of the digestive and liver disease community, as the Junior Investigator transitions to independence.

ELIGIBILITY

Applicants must hold a tenure-track faculty appointment at the time the application is submitted and must meet the criteria of a junior investigator. A Junior Investigator is an individual who does not have and has not previously had an external, peer-reviewed Research Project Grant (RPG), Program Project Grant (PPG), or PPG subproject, or equivalent awards from either a Federal or non-Federal source that names that investigator as the PD/PI. Grants that name an individual as a co-investigator, collaborator, consultant, or to a position other than PD/PI or PD/PI on research grants that allow multiple PD(s)/PIs, do not disqualify that investigator from Junior Investigator status. Academic Research Enhancement Award grants, exploratory/pilot project grants (such as NIH R03 and R21 awards), and mentored career development awards (such as NIH K01 and K08 awards) do not disqualify the investigator. Junior Investigators that are also K awardees can serve as COBRE Junior Investigators only during the last two years of the K award when the effort commitment is allowed to be reduced to six person-months per NIH policy. Investigators who have obtained significant support in the form of an RPG or PPG (e.g., NIH R01, K99/R00, or P01, NSF, or other Federal or non-Federal agency awards) would not be considered Junior Investigators. All Junior Investigators must submit an investigator-initiated RPG application by the end of two years of COBRE support and commit to contributing to all CDLD activities.

APPLICATION PROCESS

- **PART 1:** Applicants should submit a letter of intent that includes an NIH Biosketch and Specific Aims Page that describes the goal of the project, summarized approach, and the expected use of CDLD Core Resources. The deadline for the letter of intent submission is **August 29, 2022**.
- **PART 2:** After a review of the letter of intent, successful applicants will be asked to submit a full application. The full application will follow the format and guidelines for a R21 application including compliance sections and a budget justification. The deadline for full application submission is **October 14, 2022**.

Application materials should be submitted to [Caroline Westwater, Ph.D.](#) Applications will be reviewed by the CDLD Executive Committee using NIH-style criteria and scoring processes and those deemed most competitive will be assessed by the CDLD External Advisory Committee. The applicant that 1) is perceived to have the highest likelihood of transitioning to NIH R01 funding within three years, 2) is most likely to benefit from CDLD core resources and mentoring, and 3) whose project most closely aligns with the CDLD goals, will be awarded a Junior Investigator position within the CDLD.

7th Annual Update in Gastroenterology & Hepatology

September 17, 2022

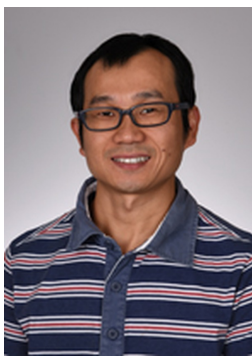
Mills House Wyndham Grand Hotel
Charleston, SC

The **MUSC Division of GI & Hepatology** will host its 7th annual update conference while marking the **50th anniversary** of its founding. All speakers this year are past MUSC faculty and fellows who have gone on to distinguished careers both nationally and internationally. The one-day conference is intended to provide authoritative updates on the clinical investigation and management of a broad spectrum of digestive and liver disease.

A listing of the agenda may be found on the conference [webpage](#), along with a [registration](#) link. Questions may be sent to the course director, [Peter Cotton, MD](#).

News from the DDRCC

New Grants: Wenjian Gan, PhD



Wenjian Gan, PhD

Wenjian Gan, PhD, Assistant Professor in the Department of Biochemistry and Molecular Biology, was recently awarded two new grants, from the American Cancer Society and NIH:

American Cancer Society: Research Scholar Grant
"Regulation and targeting of PRMT5 in breast cancer."

RSG-22-068-01-TBE

July 1, 2022 - June 30, 2026 (\$792,000)

NIH/NIGMS

"Regulatory Mechanisms of Arginine Methylation."

R35 GM146749

August 1, 2022 - May 31, 2027 (\$1,887,500)

Congratulations, Dr. Gan!

New Grant: Jessica Hathaway-Schrader, PhD



Jessica
Hathaway-
Schrader, PhD

Jessica Hathaway-Schrader, PhD, Assistant Professor in the Department of Pathology and Laboratory Medicine, was recently awarded a CDA-2 VA Career Development Program Grant titled:

"Role of Complement in Commensal Microbiota Actions Regulating Skeletal Maturation."

1K2BX005813-01A1

April 1, 2022 - March 31, 2027 (\$983,100)

Congratulations, Dr. Hathaway-Schrader!

New Grant: Silvia Guglietta, PhD



Silvia Guglietta, PhD

[Silvia Guglietta, PhD](#), Assistant Professor in Regenerative Medicine and Cell Biology Dept, recently received a notice award for her R01 project titled:

"Role of the complement C3a receptor on immune and non immune intestinal barrier functions and microbiota in colorectal cancer development."

NIH/NCI R01 CA258882-01A1

(August 1, 2022 - July 31, 2027; \$1,507,726)

Congratulations, Dr. Guglietta!

Chan Zuckerberg Initiative Imaging Scientist: Monika Gooz, MD, PhD



Monika Gooz, MD, PhD

Monika Beck Gooz, MD, PhD, Associate Professor in Drug Discovery & Biomedical Sciences, successfully renewed her grant from the Chan Zuckerberg Initiative to further promote the dissemination of high end microscopy and imaging skills.

In June of this year, Dr. Gooz attended an intensive [Leadership Training in Core Facility Management](#) workshop at Northwestern University/Kellogg. The first MUSC member to participate in this training, she studied aspects of financing, marketing, team building and management from psychologists, scientists and business faculty, all geared toward meeting the unique challenges of operating a facility in a university setting.

Congratulations, Dr. Gooz!

College of Pharmacy Researcher of the Year: Zhi Zhong, PhD



Zhi Zhong, PhD

[Zhi Zhong, PhD](#), Professor in the Department of Drug Discovery and Biomedical Studies, was recently named the Researcher of the Year by the College of Pharmacy. Her collaborative work with DDRCC Imaging Core Director [John J. Lemasters, MD, PhD](#) implicating mitochondrial DAMPs (Damage Associated Molecular Patterns) in the genesis of alcoholic liver disease was recently featured in MUSC's Catalyst, as well as in the journal [Autophagy](#).

Congratulations, Dr. Zhong!

We like to hear about your progress and achievements!

Please send your news and announcements to the DDRCC Digest via email to the [Center Manager](#).

DDRCC and CDLD Enrichment Seminar Series

We were privileged to host an outstanding series of virtual seminars this year, featuring speakers of national and international renown. All of the GI & Hepatology 7am series were recorded, and are available through Box. A few notable highlights are mentioned below. The complete collection of recorded talks are available to DDRCC and CDLD members [here](#).

**DDRCC / CDLD / GI and Hepatology Grand Rounds:
Wednesday, 7am EST (Zoom)**

The series will resume September 21, 2022

**DDRCC/CDLD/ RMCB Virtual Seminar Series:
Wednesday, 11 am EST (Zoom)**

The DDRCC/CDLD Seminar Series will return in September

To receive notifications for our Enrichment series seminars, please contact the [DDRCC Center Manager](#).

Selected GI Publications by our Members

Each newsletter, we highlight a subset of the many outstanding papers published and presented by our DDRCC members. We strive to mention particularly significant primary research papers where our members were lead authors or key contributors, and to represent the broad scope of clinical, basic science and clinical-translational research interests across our membership. To assist us in these efforts, we continue to encourage you to [email Kyu](#), our center manager, about your particularly significant papers and presentations.

While space does not allow us to list a comprehensive month-to-month list of our member publications, such a list can be found on our DDRCC website [here](#).

A complete listing of our DDRCC member publications since its inception can also be found through NCBI [here](#).

June, 2022 - July, 2022

Horn J, Simpson KN, Simpson AN, Bonilha LF, **Bonilha HS**. Incidence of Poststroke Depression in Patients With Poststroke Dysphagia. *Am J Speech Lang Pathol*. 2022 Jul 12;31(4):1836-1844. PubMed PMID: 35858266.

Chetta KE, Newton DA, Wagner CL, Baatz JE. Free Fatty Acid and α -Lactalbumin-Oleic Acid Complexes in Preterm Human Milk Are Cytotoxic to Fetal Intestinal Cells in vitro. *Front Nutr*. 2022;9:918872. PubMed PMID: 35866080; PubMed Central PMCID: PMC9294382.

Lockett MA, Ward RC, McCauley JL, **Taber DJ**, Gebregziabher M, Cina RA, Basco WT Jr, **Mauldin PD**, Ball SJ. New chronic opioid use in Medicaid patients following cholecystectomy. *Surg Open Sci.* 2022 Jul;9:101-108. PubMed PMID: 35755164; PubMed Central PMCID: PMC9218552.

Radadiya D, Devani K, **Rockey DC**. The impact of red blood cell transfusion practices on inpatient mortality in variceal and non-variceal gastrointestinal bleeding patients: a 20-year US nationwide retrospective analysis. *Aliment Pharmacol Ther.* 2022 Jul;56(1):41-55. PubMed PMID: 35591774.

Adelusi OB, Ramachandran A, **Lemasters JJ**, Jaeschke H. The role of Iron in lipid peroxidation and protein nitration during acetaminophen-induced liver injury in mice. *Toxicol Appl Pharmacol.* 2022 Jun 15;445:116043. PubMed PMID: 35513057.

Kingsley C, **Kourtidis A**. Critical roles of adherens junctions in diseases of the oral mucosa. *Tissue Barriers.* 2022 Jun 5;:2084320. PubMed PMID: 35659464.

Wilson DJ, **DuBois RN**. Role of Prostaglandin E2 in the Progression of Gastrointestinal Cancer. *Cancer Prev Res (Phila).* 2022 Jun 2;15(6):355-363. Review. PubMed PMID: 35288737.

Sullivan MK, Daher HB, **Rockey DC**. Normal or near normal aminotransferase levels in patients with alcoholic cirrhosis. *Am J Med Sci.* 2022 Jun;363(6):484-489. PubMed PMID: 34619146.

Farahat TM, Ungan M, Vilaseca J, Ponzo J, Gupta PP, **Schreiner AD**, Al Sharief W, Casler K, Abdelkader T, Abenavoli L, Alami FM, Ekstedt M, Jabir MS, Armstrong MJ, Osman MH, Wiegand J, Attia D, Verhoeven V, Amir AAQ, Hegazy NN, Tsochatzis EA, Fouad Y, Cortez-Pinto H. The paradigm shift from NAFLD to MAFLD: A global primary care viewpoint. *Liver Int.* 2022 Jun;42(6):1259-1267. Review. PubMed PMID: 35129258.

Warner AJ, **Hathaway-Schrader JD**, Lubker R, Davies C, **Novince CM**. Tetracyclines and bone: Unclear actions with potentially lasting effects. *Bone.* 2022 Jun;159:116377. Review. PubMed PMID: 35248788; PubMed Central PMCID: PMC9035080.

Broussard KA, **Rockey DC**. Bleeding ectopic varices: clinical presentation, natural history, and outcomes. J Investig Med. 2022 Jun;70(5):1280-1284. PubMed PMID: 35246467.

Burton HJ, Khatiwada A, Chung D, **Meissner EG**. Association of Referral Source and Substance Use with Hepatitis C Virus Outcomes at a Southern Academic Medical Center. South Med J. 2022 Jun;115(6):352-357. PubMed Central PMCID: PMC9179028.

Heslop KA, Burger P, Kappler C, Solanki AK, **Gooz M**, Peterson YK, Mills C, Benton T, **Duncan SA**, **Woster PM**, **Maldonado EN**. Small molecules targeting the NADH-binding pocket of VDAC modulate mitochondrial metabolism in hepatocarcinoma cells. Biomed Pharmacother. 2022 Jun;150:112928. PubMed PMID: 35447542.

Vuppalanchi R, Bonkovsky HL, Ahmad J, Barnhart H, Durazo F, Fontana RJ, Gu J, Khan I, Kleiner DE, Koh C, **Rockey DC**, Phillips EJ, Li YJ, Serrano J, Stolz A, Tillmann HL, Seeff LB, Hoofnagle JH, Navarro VJ. Garcinia cambogia, Either Alone or in Combination With Green Tea, Causes Moderate to Severe Liver Injury. Clin Gastroenterol Hepatol. 2022 Jun;20(6):e1416-e1425. PubMed PMID: 34400337; PubMed Central PMCID: PMC9004424.

Remillard TC, Cronley AC, Pilch NA, **Dubay DA**, **Willner IR**, Houston BA, Jackson GR, Inampudi C, Ramu B, Kilic A, Fudim M, Wright SP, Hajj ME, Tedford RJ. Hemodynamic and Clinical Determinants of Left Atrial Enlargement in Liver Transplant Candidates. Am J Cardiol. 2022 Jun 1;172:121-129. PubMed PMID: 35341576.

Accessing DDRCC Cores

Quick Links for DDRCC and CDLD Core Use

A reminder that Full Members receive subsidized usage of our [cores](#). Below are some summary details for accessing the cores and initiating projects.

This project was supported in part by NIH P30 **DK123704** (*core facility*) at the MUSC Digestive Disease Research Core Center.

This project was supported in part by NIH P20 **GM120475** (*core facility*) at the MUSC Digestive Disease Research Core Center.

Analytical Cell Models Core:

- The DDRCC and CDLD both **fully subsidize** the use of the ACC by its members.
- For iPSC projects, please contact the Core Director, [Dr. Steve Duncan](#).
- For primary cell isolation, please contact [Dr. Don Rockey](#).

Advanced Imaging Core:

- The DDRCC and CDLD both provide **full members** with a **25% discount** on facility fees.
- For imaging projects, please contact the Core Director, **Dr. John Lemasters** and Core Manager **Li Li**.

CDLD Animal Models Core:

- The CDLD **fully subsidizes** the use of the Animal Models Core for its **Junior Investigators**.
- Other **discounts** may currently apply for DDRCC members.
- For animal projects please contact the Core Director, **Dr. Kristi Helke**.
- For gnotobiotic mouse models, please contact **Dr. Caroline Westwater**.
- For transgenic and CRISPR/Cas9 projects, please contact the TGE Director, **Dr. Fulei Tang**, or Executive Director, **Dr. Alexander Awgulewitsch**.

DDRCC Proteomics Core:

- **DDRCC full members** will receive a 50% discount from facility fees.
- For MS projects, please contact the Core Co-Director, **Dr. Lauren Ball**.

Clinical Component Core:

- The DDRCC and CDLD **fully subsidize** biostatistical consultations with the Clinical Component Core by all of its members, including biostatistical support and mentoring for its Junior Investigators and Pilot & Feasibility applicants and awardees.
- To start a project, visit the [SPARC website](#) and submit a Biostatistics, Design & Epidemiology request, and contact:
 - DDRCC Core Director, **Dr. Paul Nietert**
 - CDLD Director **Dr. Ramesh Ramakrishnan**.

CITE OUR GRANTS

FOR THE DDRCC:

P30 DK123704

FOR THE COBRE CDLD:

P20 GM120457

For queries regarding DDRCC news, membership and cores, please contact the Center Manager:

Kyu-Ho Lee, MD-PhD

Gastroenterology and Hepatology
Department of Medicine
CSB HE903B
96 Jonathan Lucas St
Charleston, SC 29425
(843) 792-1689

[Email Dr. Lee](#)

For queries regarding the COBRE in Digestive and Liver Disease, please contact the COBRE PI:

Stephen Duncan, DPhil

Department Chair
Regenerative Medicine and Cell Biology
BSB 657A MSC508
173 Ashley Ave
Charleston, SC 29425
(843) 792-9104

[Email Dr. Duncan](#)

Visit the DDRCC Website:

<https://medicine.musc.edu/departments/divisions/gastroenterology/research/labs-and-centers/ddrcc>

Visit the CDLD Website:

<https://medicine.musc.edu/departments/regenerative-medicine/cobre-digestive-liver-disease>

